

Appln. No. 10/783,894
Filing Date: February 20, 2004
Supp. Prel. Amdt. dated May 16, 2006

AMENDMENTS TO THE CLAIMS

Listing of Claims:

Claims 1-21 (Canceled).

Claim 22. (Previously Presented) An information transmission device for communicatively coupling at least one packet network to at least one communication network having an associated information format, the device comprising:

at least one packet interface for exchanging information via the at least one packet network;

at least one network interface, each of the at least one network interface for exchanging information via one of the at least one communication network in an associated format;

at least one converter for selectively converting information received by one of the at least one packet interface for transmission via one of the at least one network interface in the associated format, and for selectively converting for transmission via the one of the at least one packet interface information received from the one of the at least one network interface in the associated format; and

a host interface supporting the communication of status and control information between the information transmission device and a host device, the host interface permitting management of the information transmission device by a host device compatible with the host interface.

Claim 23. (Previously Presented) The device of claim 22 wherein the at least one packet interface is compliant with an Internet protocol (IP).

Claim 24. (Previously Presented) The device of claim 23 wherein the Internet protocol is the transport control protocol (TCP)/Internet protocol (IP).

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Claim 25. (Previously Presented) The device of claim 22 wherein the information exchanged via the at least one packet interface comprises digitized voice information.

Claim 26. (Previously Presented) The device of claim 22 wherein the information exchanged via the packet interface comprises non-voice data.

Claim 27. (Previously Presented) The device of claim 26 wherein at least a portion of the non-voice data is unrelated to the exchange of digitized voice information.

Claim 28. (Previously Presented) The device of claim 22 wherein the at least one network interface provides the functionality of a conventional telephone switching network interface.

Claim 29. (Previously Presented) The device of claim 28 wherein the at least one network interface provides at least one of a battery supply, over-voltage protection, ringing current, tone generation, tone detection, two wire to four wire conversion, and test functionality.

Claim 30. (Previously Presented) The device of claim 28 wherein the at least one converter converts digitized voice information into an analog voice signal, and an analog voice signal into digitized voice information.

Claim 31. (Previously Presented) The device of claim 30 wherein the at least one converter buffers digitized voice information for a predefined period of time to minimize gaps in an analog voice signal.

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Claim 32. (Previously Presented) The device of claim 31 wherein the predefined period of time is based upon a propagation delay of a communication network.

Claim 33. (Previously Presented) The device of claim 30 wherein the at least one converter reduces the number of voice packets transmitted via the at least one packet network, by changing the packetization of digitized voice information when voice activity on the at least one network interface is below a predetermined level.

Claim 34. (Previously Presented) The device of claim 28 wherein the at least one network interface is a digital interface.

Claim 35. (Previously Presented) The device of claim 22 wherein the at least one converter compensates for a difference in bit rate between interfaces.

Claim 36. (Previously Presented) The device of claim 22 wherein the at least one converter adapts information received via the at least one packet interface into modem signals for transmission via the at least one network interface, and adapts modem signals received via the at least one network interface into information for transmission via the at least one packet interface.

Claim 37. (Previously Presented) The device of claim 22 wherein the host interface supports the communication of information related to telephony signals received via the at least one network interface.

Claim 38. (Previously Presented) The device of claim 37 wherein telephony signals received comprises at least one of dual tone multi-frequency (DTMF) signals, dial tone, a ring signal, on-hook, off-hook, and call progress tones.

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Claim 39. (Previously Presented) The device of claim 22 wherein the host interface supports the communication of information related to generation of telephony signals for transmission via the at least one network interface.

Claim 40. (Previously Presented) The device of claim 39 wherein the telephony signals for transmission comprise at least one of dual tone multi-frequency (DTMF) signals, dial tone, a busy signal, and a ringing signal.

Claim 41. (Previously Presented) The device of claim 22 wherein the host interface supports exchange of voice messages for transmission via the at least one network interface.

Claim 42. (Previously Presented) The device of claim 22 wherein the host interface supports exchange of information related to a propagation delay of a communication network.

Claim 43. (Previously Presented) The device of claim 22 wherein the packet network is a wireless network.

Claim 44. (Previously Presented) A method for communicatively coupling a packet network to at least one communication network having an associated information format, the method comprising:

receiving, from one of the packet network and the at least one communication network, information requesting setup of a call between the packet network and the at least one communication network;

providing, to a host device, at least a portion of the information requesting setup of a call;

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receiving, from the host device, configuration information based upon the at least a portion of the information requesting setup of a call; and

establishing call communication between the packet network and the at least one communication network based upon the configuration information, the communication including the conversion of information received in a packet format for transmission in the associated format, and the conversion of information received in the associated format for transmission in a packet format.

Claim 45. (Previously Presented) The method of claim 44 wherein the packet network is compliant with an Internet protocol (IP).

Claim 46. (Previously Presented) The method of claim 45 wherein the Internet Protocol is compliant with the transmission control protocol (TCP)/ Internet protocol (IP).

Claim 47. (Previously Presented) The method of claim 44 wherein packets comprise digitized voice information.

Claim 48. (Previously Presented) The method of claim 44 wherein packets comprise non-voice data.

Claim 49. (Previously Presented) The method of claim 48 wherein at least a portion of the non-voice data is unrelated to the communication of digitized voice information.

Claim 50. (Previously Presented) The method of claim 44 wherein the at least one communication network is a second packet network.

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Claim 51. (Previously Presented) The method of claim 50 wherein the second packet network is compliant with an Internet protocol (IP).

Claim 52. (Previously Presented) The method of claim 51 wherein the Internet Protocol is compliant with the transmission control protocol (TCP)/ Internet protocol (IP).

Claim 53. (Previously Presented) The method of claim 44 wherein the at least one communication network comprises a conventional telephone switching network.

Claim 54. (Previously Presented) The method of claim 53 wherein the associated format is an analog format.

Claim 55. (Previously Presented) The method of claim 53 wherein the associated information format is a digital format.

Claim 56. (Previously Presented) The method of claim 53 wherein the associated format is a modem signal.

Claim 57. (Previously Presented) The method of claim 44 wherein the conversion of information received in a packet format for transmission in the associated format comprises converting digitized voice information into an analog voice signal.

Claim 58. (Previously Presented) The method of claim 44 wherein the conversion of information received in a packet format for transmission in the associated format comprises buffering digitized voice information for a period of time to minimize gaps in a voice signal.

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Claim 59. (Previously Presented) The method of claim 44 wherein the conversion of information received in the associated format for transmission in the packet format comprises converting an analog voice signal into digitized voice information.

Claim 60. (Previously Presented) The method of claim 44 wherein conversion of information received in the associated format for transmission in a packet format reduces the number of voice packets transmitted via the at least one packet network, by changing the packetization when voice activity on the at least one network interface is below a predetermined level.

Claim 61. (Previously Presented) The method of claim 44 wherein the host device is a personal computer.

Claim 62. (Previously Presented) The method of claim 44 wherein the packet network is a wireless network.

Claim 63. (Previously Presented) A machine-readable storage having stored thereon a computer program having a plurality of code sections for implementing a system supporting communication between a packet network and at least one other network, the at least one other network having an associated communication format, the code sections executable by a machine for causing the machine to perform the operations comprising:

accepting a request for setup of a call, the request identifying the at least one other network;

providing, to a host device, information related to the call setup request;

receiving, from the host device, call parameters derived from the information related to the call setup request; and

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communicatively coupling the packet network and the at least one other network, based upon the call parameters.

Claim 64. (Previously Presented) The machine-readable storage of claim 63 wherein the coupling comprises:

converting information from a packet format to the associated communication format of the at least one other network; and

transforming information from the associated communication format of the at least one other network to a packet format.

Claim 65. (Previously Presented) The machine-readable storage of claim 63 wherein the packet format is compliant with an Internet protocol (IP).

Claim 66. (Previously Presented) The machine-readable storage of claim 65 wherein the packet format is the transmission control protocol (TCP)/Internet protocol (IP).

Claim 67. (Previously Presented) The machine-readable storage of claim 63 wherein the at least one other network comprises a conventional telephone switching network.

Claim 68. (Previously Presented) The machine-readable storage of claim 67 wherein the associated communication format of the at least one other network is an analog format.

Claim 69. (Previously Presented) The machine-readable storage of claim 63 further comprising:

exchanging with the host device digitized voice information.

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Claim 70. (Previously Presented) The machine-readable storage of claim 63 wherein the packet network is a wireless network.